REMARKS / ARGUMENTS

Claims 1-7, and 10- 32 remain in this application. Claims 8 and 9 have been currently deleted. Claim 1 has been amended to better define the invention. Claims 10-13, 15, and 16 have been amended to correct claim dependency.

Claim Rejections Under 35 U.S.C. § 102

Claims 1 and 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Brunner '874. Contrary to the Examiner's statement, all the elements of the present invention are not claimed in Brunner '874.

Claim 1 of the instant application positively recites, and requires, three steps: 1) packaging a food product in a modified atmosphere, 2) irradiating this food product, and 3) removing oxidants from the modified atmosphere. Brunner '874 does not *positively claim* these steps.

Brunner '874 does not require a modified atmosphere at the time of packaging. Claim 1, the sole independent claim of Brunner '874, requires a package comprising three elements : 1) a material to be irradiated, 2) a sealed, gas-tight covering over this material, and 3) a medium within this sealed package capable of binding with (and removing) the oxygen from within this package. Neither claim 1, nor any of the 10 subsequent dependent claims, even mention the atmosphere in the package. There is no positive recitation of a modified atmosphere inside this package, at the time of packaging. There is no positive recitation of the step of irradiation.

Thus the § 102 rejection is unsupported and should be withdrawn.

Claims 22, and 27-30 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Todd '879. Contrary to the Examiner's statement, all the elements of the present invention are not claimed in the Brunner '874.

Claim 23 of the instant application positively recites, and requires, three steps: 1) applying an oxidant-reactive chemical substance to a food product, 2) packaging a food product in a substantially oxidant-free modified atmosphere, and 3) irradiating this food product atmosphere.

Todd '879 does not *positively claim* these steps.

Claims 1, 22, 25 and 27 of Todd '879 fail to positively recite the step of irradiation, and only mention this irradiation in the preamble. The requirement of a modified atmosphere as an initial condition is not claimed. The requirement of packaging is not even claimed in Todd '879.

Thus the § 102 rejection is unsupported and should be withdrawn.

Claim Rejections Under 35 U.S.C. § 103

1) Claims 2, 3, and 8-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brunner '874 in view of Titchenal et al '092, Weinke '672, and Hirsch et al '672, further in view of Urbain '369. Applicant respectfully maintain that the present invention is patentable over Brunner '874 in view of Titchenal et al '092, Weinke '672, and Hirsch et al '672, further in view of Urbain '369.

Claims 8 and 9 have been cancelled, thereby rendering any rejection directed toward them moot.

The above recited references are not properly combinable, since this would destroy the intended function of each individual invention. There is no motivation to combine, indeed, each of these references address largely the same problem in unique and mutually exclusive ways. Each of these references teaches away from the other.

- Brunner '874 : Teaches a package comprising three elements : 1) a material to be irradiated, 2) a sealed, gas-tight covering over this material, and 3) a medium within this sealed package capable of binding with (and removing) the oxygen from within this package. Dependent claims address various aspects of the medium.

  Brunner '874 teaches the use of irradiation. Brunner '874 actually teaches away from starting with a modified atmosphere, which they say is expensive and complicated, and unnecessary with their invention. Brunner '874 does not disclose a dual-layer (permeable and non-permeable) packaging system, as allowing oxygen into the package would defeat the purpose of having the oxygen binding medium in the package.

- Titchenal et al. '092 : Teaches a system comprising four steps : 1) placing meat inside a pack made of oxygen permeable film, 2) placing this pack inside a second pack made of impermeable film, 3) removing air from the dual package and sealing, and 4) shrinking the pack to tightly bind the meat. Dependent claims address various aspects of the permeability of the first film, material of either film, or degree of shrinking.

  Titchenal et al '092 does not teach starting with a modified atmosphere nor does it disclose oxygen removal by means of a binding medium. Indeed the required evacuation process would have rendered such conditions irrelevant. The draftsman, and by inference the inventors, were

well aware of the disclosure of Weinke '642, as it is cited in the References Cited section of Titchenal et al '092. Titchenal et al '092 does not teach the use of irradiation.

- Weinke '642 : Teaches a system comprising three steps : 1) sealing the raw meat in a first, oxygen permeable container, 2) sealing this first container in a second, oxygen impermeable container, and 3) placing both containers under anaerobic conditions to maintain the 'fresh cut color of the raw meat'. Dependent claim 2 places an inert gas inside the containers. Dependent claim 6 requires evacuation of these packages then a flushing with inert gas. Other dependent claims discuss materials for the films.

  Weinke '642 does not teach the use of irradiation, nor does it teach the use of oxygen removal by means of a binding medium. This system is enabled using an evacuation process, which may or may not be followed by the flushing with an inert gas. There would be no point in using a binding medium to remove oxygen, as no oxygen would be present given the teachings of Weinke '642.

- Hirsch et al '672 : Teaches a system comprising three steps : 1) placing meat in an oxygen impermeable container, 2) surrounding the meat with a non-oxygen containing atmosphere, 3) sealing the container with a composite lid (with an oxygen permeable layer and an oxygen impermeable layer). Dependent claim 3 requires an environment of nitrogen and carbon dioxide. Dependent claim 4 requires a vacuum within the package. The remaining dependent claims discuss film materials, and tray configurations.

Hirsch et al '672 does not teach the use of irradiation, nor does it teach the use of oxygen removal by means of a binding medium. This system is enabled using either an evacuation process or an inert atmosphere. The draftsman, and by inference the inventors, was well aware of the disclosures of Weinke '642 and Titchenal et al '092, as they are cited in the References Cited section of Hirsch et al '672. There would be no point in using a binding medium to remove oxygen, as no oxygen would be present given the teachings of Hirsch et al '672.

- Urbain '369 : Teaches a system comprising two steps : 1) irradiating meat, 2) putting this irradiated meat in an oxygen-enriched environment to restore the bright red color.

Urbain '369 was granted in 1960, which is more than a decade prior to any of the other references. The draftsmen, and by inference the inventors, were well aware of all these subsequent patents would know about the technique taught in Urbain '369. Urbain '369 does not teach a dual layer packing system, a modified atmosphere in this package or any oxygen binding medium.

In contrast, Urbain '369 *requires* the presence of high levels of oxygen almost immediately after irradiation. Modified atmosphere packaging was not introduced into the market until the late 1970's, and the technology for dual layer packaging was also not available at the time of this invention. The inventor intended for the irradiation process alone to be adequate to preserve the quality of the product, and with the required oxygen-rich environment, the color is also preserved.

Dependent **Claim 2** of the instant application positively recites, and requires, three steps:

1) packaging a food product in a modified atmosphere, wherein this packaging is a multi-layer film having an inner oxygen-permeable layer and an outer oxygen-impermeable layer,
2) irradiating this food product, and
3) removing oxidants from the modified atmosphere, where this removal is accomplished by starting with a substantially oxidant-free modified atmosphere.

Brunner '874 requires the use of an oxygen-binding medium. It is *only enabled* with the use of an oxygen-binding medium. Brunner '874 does not teach, or suggest, the use of a 'substantially oxidant-free modified atmosphere', which would effectively negate the requirement for the claimed oxygen-binding medium.

By removing this critical element, the oxygen-binding medium, and thereafter combining Brunner '874 with any of the other references, the fundamental intended function of Brunner '874 is destroyed. One of ordinary skill in the art would not have looked to the teachings of any of the other references cited, to modify Brunner '874.

Both Titchenal et al '092 and Hirsch et al '672 require a starting atmosphere that is substantially oxygen free. In the case of Titchenal et al '092, this oxygen-free atmosphere is a vacuum.

By removing this critical element, the initial condition of being substantially oxygen free, thereafter combining either Titchenal et al '092 or Hirsch et al '672 with Brunner '874, the fundamental intended function of both is destroyed. One of ordinary skill in the art would not have looked to the teachings of Brunner '874, or any of the other references cited, to modify either Titchenal et al '092 or Hirsch et al '672.

These reference are not properly combinable since their intended functions would be destroyed, thus rendering this rejection moot.

2) Claims 4-7, 18-21, and 22-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brunner '874 in view of Todd '879. Applicant respectfully maintain that the present invention is patentable over Brunner '874 in view of Todd '879.

- As discussed above, Brunner '874 teaches a package comprising three elements : 1) a material to be irradiated, 2) a sealed, gas-tight covering over this material, and 3) a medium within this sealed package capable of binding with (and removing) the oxygen from within this package. Dependent claims address various aspects of the medium.

  Todd '879 teaches the use of various spice extracts to prevent deterioration of flavor and odor in irradiated meats.

  Brunner '874 teaches the use of irradiation. Brunner '874 actually teaches away from starting with a modified atmosphere. Todd '879 fails to remedy this deficiency.

  Claim 4 of the instant application positively recites, and requires, four steps: 1) applying an oxidant-reactive chemical to a food product, 2) packaging the food product in a modified atmosphere, 3) irradiating this food product, and 4) removing oxidants from the modified atmosphere.

  Neither Brunner '874 nor Todd '879, either alone or in combination, teach or suggest all four of these steps.

3) Claims 23-26, and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brunner '874 in view of Todd '879, and further in view of Titchenal, Weinke and Hirsch et al for the reasons give above.. Applicant respectfully maintain that the present invention is patentable over Brunner '874 in view of Todd '879 and further in view of Titchenal, Weinke and Hirsch et al.

Claim 23 of the instant application positively recites, and requires, three steps: 1) applying an oxidant-reactive chemical to a food product, 2) packaging the food product in a modified atmosphere, where this packaging is a multi-layer film, and 3) irradiating this food product.

Neither Brunner '874 nor Todd '879, either alone or in combination with Titchenal, Weinke and Hirsch et al., teach or suggest all three of these steps.

4) Claim 31 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Todd '897 in view of Brunner '874. Applicant respectfully maintain that the present invention is patentable over Todd '897 in view of Brunner '874.

As discussed above neither Todd '879 nor Brunner '874, either alone or in combination either teach or suggest the present invention.

CONCLUSION

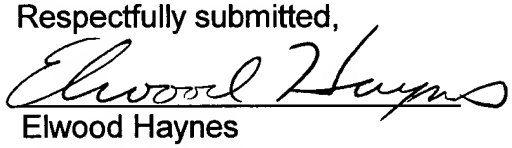
With the exception of Todd, Jr. '879, the art of record all teach unique and independent methods of accomplishing largely the same general goal. These various systems are not properly combinable or modifiable, because their intended function would be destroyed. As the Federal Circuit noted in *In re Mills,* 916 F.2d 680 (Fed. Cir 1990) "The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." There must be some logical

reason, apparent from the record, that would justify a combination. None is present in the art of record.

In view of the current amendments, the present application now stands in condition for allowance. Early notice to this effect is earnestly solicited.

Should the Examiner believe that a telephone call would expedite the prosecution of the application, he is invited to call the undersigned attorney at the number listed below.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 6th day of May, 2004.

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